

## SEQUENCE LISTING

<110> INCYTE PHARMACEUTICALS, INC.

TANG, Y. Tom  
CORLEY, Neil C.  
GUEGLER, Karl J.  
GORONE, Gina A.  
AZIMZAI, Yalda  
KASER, Matthew R.  
YUE, Henry

<120> COENZYME A-UTILIZING ENZYMES

<130> PF-0622 PCT

<140> To Be Assigned

<141> Herewith

<150> 09/185,217; unassigned

<151> 1998-11-03; 1998-11-03

<160> 10

<170> PERL Program

<210> 1

<211> 100

<212> PRT

<213> Homo sapiens

<220>

<221> misc\_feature

<223> Incyte ID No: 1580751CD1

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Asn Val His Glu Lys Lys Leu Gly Asp Lys Val Ala Phe Tyr Trp  
20 25 30

Pro Cys Gln Arg Asp Gln Asp Gly Tyr Tyr Trp Ile Thr Gly Arg  
35 40 45

Ile Asp Asp Met Leu Asn Val Ser Gly Glu Gly Gln Gly Pro Pro  
50 55 60

Ser His Leu Ile Asn Ser Ala Pro Leu Thr Thr Pro Ser Arg Ser  
65 70 75

Leu Pro Gln Glu Pro Arg Ser Val Leu Trp Pro Asp His Val Leu  
80 85 90

Ser Val Ala Phe Ser Ser Gly Pro Arg Phe  
95 100

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<211> 159

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<220>  
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Val	Ser	Arg	Phe	Leu	His	Leu	Gln	Ser	Pro	Phe	Leu	Thr	Gln	Val
					20				25					30
His	Ser	Glu	Gln	Trp	Gln	Leu	Ser	Thr	Ser	Gln	Ile	Pro	Val	Gln
					35				40					45
Gln	Met	His	Leu	Phe	Asp	Val	His	Asn	Tyr	Pro	Asp	Tyr	Val	Ser
					50				55					60
Ser	Gly	Gly	Gly	Phe	Gly	Pro	Ala	Asp	Asp	His	Gly	Tyr	Gly	Val
					65				70					75
Ser	Tyr	Ile	Phe	Met	Gly	Asp	Gly	Met	Ile	Thr	Phe	His	Ile	Ser
					80				85					90
Ser	Lys	Lys	Ser	Ser	Thr	Lys	Thr	Asp	Ser	His	Arg	Leu	Gly	Gln
					95				100					105
His	Ile	Glu	Asp	Ala	Leu	Leu	Asp	Val	Ala	Ser	Leu	Phe	Gln	Ala
					110				115					120
Gly	Gln	His	Phe	Lys	Arg	Arg	Phe	Arg	Gly	Ser	Gly	Lys	Glu	Asn
					125				130					135
Ser	Arg	His	Arg	Cys	Gly	Phe	Leu	Ser	Arg	Gln	Thr	Gly	Ala	Ser
					140				145					150
Lys	Ala	Ser	Met	Thr	Ser	Thr	Asp	Phe						
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<213> Homo sapiens

<220>  
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Ser	Glu	Leu	Leu	Glu	Thr	Leu	Ala	Gln	Leu	Arg	Glu	Asp	Arg	Gln
					20				25					30
Val	Arg	Val	Leu	Leu	Phe	Arg	Ser	Gly	Val	Lys	Gly	Val	Phe	Cys
					35				40					45
Ala	Gly	Ala	Asp	Leu	Lys	Glu	Arg	Glu	Gln	Met	Ser	Glu	Ala	Glu
					50				55					60
Val	Gly	Val	Phe	Val	Gln	Arg	Leu	Arg	Gly	Leu	Met	Asn	Asp	Ile
					65				70					75
Ala	Ser	Ser	Ala	Val	Met	Gly	Leu	Ile	Glu	Thr	Thr	Arg	Gly	Leu
					80				85					90
Leu	Pro	Gly	Ala	Gly	Gly	Thr	Gln	Arg	Leu	Pro	Arg	Cys	Leu	Gly

95	100	105
Val Ala Leu Ala Lys	Glu Leu Ile Phe	Thr Gly Arg Arg Leu Ser
110		115 120
Gly Thr Glu Ala His	Val Leu Gly Leu	Val Asn His Ala Val Ala
125		130 135
Gln Asn Glu Glu Gly	Asp Ala Ala Tyr	Gln Arg Ala Arg Ala Leu
140		145 150
Ala Gln Glu Ile Leu	Pro Gln Ala Pro	Ile Ala Val Arg Leu Gly
155		160 165
Lys Val Ala Ile Asp	Arg Gly Thr Glu	Val Asp Ile Ala Ser Gly
170		175 180
Met Ala Ile Glu Gly	Met Cys Tyr Ala	Gln Asn Ile Pro Thr Arg
185		190 195
Asp Arg Leu Glu Gly	Met Ala Ala Phe	Arg Glu Lys Arg Thr Pro
200		205 210
Lys Phe Val Gly Lys		
215		

<210> 4  
<211> 720  
<212> PRT  
<213> Homo sapiens

<220>  
<221> misc\_feature  
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His Thr Ile Asn Pro Ile Leu Leu Tyr Phe Ile His Phe Leu Ile		
20		25 30
Ser Leu Tyr Thr Ile Leu Thr Tyr Ile Pro Phe Tyr Phe Phe Ser		
35		40 45
Glu Ser Arg Gln Glu Lys Ser Asn Arg Ile Lys Ala Lys Pro Val		
50		55 60
Asn Ser Lys Pro Asp Ser Ala Tyr Arg Ser Val Asn Ser Leu Asp		
65		70 75
Gly Leu Ala Ser Val Leu Tyr Pro Gly Cys Asp Thr Leu Asp Lys		
80		85 90
Val Phe Thr Tyr Ala Lys Asn Lys Phe Lys Asn Lys Arg Leu Leu		
95		100 105
Gly Thr Arg Glu Val Leu Asn Glu Glu Asp Glu Val Gln Pro Asn		
110		115 120
Gly Lys Ile Phe Lys Lys Val Ile Leu Gly Gln Tyr Asn Trp Leu		
125		130 135
Ser Tyr Glu Asp Val Phe Val Arg Ala Phe Asn Phe Gly Asn Gly		
140		145 150
Leu Gln Met Leu Gly Gln Lys Pro Lys Thr Asn Ile Ala Ile Phe		
155		160 165
Cys Glu Thr Arg Ala Glu Trp Met Ile Ala Ala Gln Ala Cys Phe		
170		175 180
Met Tyr Asn Phe Gln Leu Val Thr Leu Tyr Ala Thr Leu Gly Gly		
185		190 195

Pro Ala Ile Val His Ala Leu Asn Glu Thr Glu Val Thr Asn Ile  
                   200                  205                  210  
 Ile Thr Ser Lys Glu Leu Leu Gln Thr Lys Leu Lys Asp Ile Val  
                   215                  220                  225  
 Ser Leu Val Pro Arg Leu Arg His Ile Ile Thr Val Asp Gly Lys  
                   230                  235                  240  
 Pro Pro Thr Trp Ser Glu Phe Pro Lys Gly Ile Ile Val His Thr  
                   245                  250                  255  
 Met Ala Ala Val Glu Ala Leu Gly Ala Lys Ala Ser Met Glu Asn  
                   260                  265                  270  
 Gln Pro His Ser Lys Pro Leu Pro Ser Asp Ile Ala Val Ile Met  
                   275                  280                  285  
 Tyr Thr Ser Gly Ser Thr Gly Leu Pro Lys Gly Val Met Ile Ser  
                   290                  295                  300  
 His Ser Asn Ile Ile Ala Gly Ile Thr Gly Met Ala Glu Arg Ile  
                   305                  310                  315  
 Pro Glu Leu Gly Glu Glu Asp Val Tyr Ile Gly Tyr Leu Pro Leu  
                   320                  325                  330  
 Ala His Val Leu Glu Leu Ser Ala Glu Leu Val Cys Leu Ser His  
                   335                  340                  345  
 Gly Cys Arg Ile Gly Tyr Ser Ser Pro Gln Thr Leu Ala Asp Gln  
                   350                  355                  360  
 Ser Ser Lys Ile Lys Lys Gly Ser Lys Gly Asp Thr Ser Met Leu  
                   365                  370                  375  
 Lys Pro Thr Leu Met Ala Ala Val Pro Glu Ile Met Asp Arg Ile  
                   380                  385                  390  
 Tyr Lys Asn Val Met Asn Lys Val Ser Glu Met Ser Ser Phe Gln  
                   395                  400                  405  
 Arg Asn Leu Phe Ile Leu Ala Tyr Asn Tyr Lys Met Glu Gln Ile  
                   410                  415                  420  
 Ser Lys Gly Arg Asn Thr Pro Leu Cys Asp Ser Phe Val Phe Arg  
                   425                  430                  435  
 Lys Val Arg Ser Leu Leu Gly Gly Asn Ile Arg Leu Leu Leu Cys  
                   440                  445                  450  
 Gly Gly Ala Pro Leu Ser Ala Thr Thr Gln Arg Phe Met Asn Ile  
                   455                  460                  465  
 Cys Phe Cys Cys Pro Val Gly Gln Gly Tyr Gly Leu Thr Glu Ser  
                   470                  475                  480  
 Ala Gly Ala Gly Thr Ile Ser Glu Val Trp Asp Tyr Asn Thr Gly  
                   485                  490                  495  
 Arg Val Gly Ala Pro Leu Val Cys Cys Glu Ile Lys Leu Lys Asn  
                   500                  505                  510  
 Trp Glu Glu Gly Gly Tyr Phe Asn Thr Asp Lys Pro His Pro Arg  
                   515                  520                  525  
 Gly Glu Ile Leu Ile Gly Gly Gln Ser Val Thr Met Gly Tyr Tyr  
                   530                  535                  540  
 Lys Asn Glu Ala Lys Thr Lys Ala Asp Phe Phe Glu Asp Glu Asn  
                   545                  550                  555  
 Gly Gln Arg Trp Leu Cys Thr Gly Asp Ile Gly Glu Phe Glu Pro  
                   560                  565                  570  
 Asp Gly Cys Leu Lys Ile Ile Asp Arg Lys Lys Asp Leu Val Lys  
                   575                  580                  585  
 Leu Gln Ala Gly Glu Tyr Val Ser Leu Gly Lys Val Glu Ala Ala  
                   590                  595                  600  
 Leu Lys Asn Leu Pro Leu Val Asp Asn Ile Cys Ala Tyr Ala Asn

605	610	615
Ser Tyr His Ser Tyr Val Ile Gly Phe	Val Val Pro Asn Gln	Lys
620	625	630
Glu Leu Thr Glu Leu Ala Arg Lys Lys	Gly Leu Lys Gly Thr	Trp
635	640	645
Glu Glu Leu Cys Asn Ser Cys Glu Met	Glu Asn Glu Leu Leu	Lys
650	655	660
Val Leu Ser Glu Ala Ala Ile Ser Ala	Ser Leu Glu Lys Phe	Glu
665	670	675
Ile Leu Val Lys Ile Arg Leu Ser Pro	Glu Pro Trp Thr Pro	Glu
680	685	690
Thr Gly Leu Val Thr Asp Ala Phe Lys	Leu Lys Arg Lys Glu	Leu
695	700	705
Lys Thr His Tyr Gln Ala Asp Ile Glu	Arg Met Tyr Gly Arg	Lys
710	715	720

<210> 5  
<211> 456  
<212> PRT  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<223> Incyte ID No: 3324214CD1

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Gly Ile Ser Leu Thr Val Leu Phe Thr	Leu Leu Leu Val Phe	Ile
20	25	30
Ile Val Pro Ala Ile Phe Gly Val Ser	Phe Gly Ile Arg Lys	Leu
35	40	45
Tyr Met Lys Ser Leu Leu Lys Ile Phe	Ala Trp Ala Thr Leu	Arg
50	55	60
Met Glu Arg Gly Ala Lys Glu Lys Asn	His Gln Leu Tyr Lys	Pro
65	70	75
Tyr Thr Asn Gly Ile Ile Ala Lys Asp	Pro Thr Ser Leu Glu	Glu
80	85	90
Glu Ile Lys Glu Ile Arg Arg Ser Gly	Ser Ser Lys Ala Leu	Asp
95	100	105
Asn Thr Pro Glu Phe Glu Leu Ser Asp	Ile Phe Tyr Phe Cys	Arg
110	115	120
Lys Gly Met Glu Thr Ile Met Asp Asp	Glu Val Thr Lys Arg	Phe
125	130	135
Ser Ala Glu Glu Leu Glu Ser Trp Asn	Leu Leu Ser Arg Thr	Asn
140	145	150
Tyr Asn Phe Gln Tyr Ile Ser Leu Arg	Leu Thr Val Leu Trp	Gly
155	160	165
Leu Gly Val Leu Ile Arg Tyr Cys Phe	Leu Leu Pro Leu Arg	Ile
170	175	180
Ala Leu Ala Phe Thr Gly Ile Ser Leu	Leu Val Val Gly Thr	Thr
185	190	195
Val Val Gly Tyr Leu Pro Asn Gly Arg	Phe Lys Glu Phe Met	Ser
200	205	210

Lys His Val His Leu Met Cys Tyr Arg Ile Cys Val Arg Ala Leu  
                  215                     220                     225  
 Thr Ala Ile Ile Thr Tyr His Asp Arg Glu Asn Arg Pro Arg Asn  
                  230                     235                     240  
 Gly Gly Ile Cys Val Ala Asn His Thr Ser Pro Ile Asp Val Ile  
                  245                     250                     255  
 Ile Leu Ala Ser Asp Gly Tyr Tyr Ala Met Val Gly Gln Val His  
                  260                     265                     270  
 Gly Gly Leu Met Gly Val Ile Gln Arg Ala Met Val Lys Ala Cys  
                  275                     280                     285  
 Pro His Val Trp Phe Glu Arg Ser Glu Val Lys Asp Arg His Leu  
                  290                     295                     300  
 Val Ala Lys Arg Leu Thr Glu His Val Gln Asp Lys Ser Lys Leu  
                  305                     310                     315  
 Pro Ile Leu Ile Phe Pro Glu Gly Thr Cys Ile Asn Asn Thr Ser  
                  320                     325                     330  
 Val Met Met Phe Lys Lys Gly Ser Phe Glu Ile Gly Ala Thr Val  
                  335                     340                     345  
 Tyr Pro Val Ala Ile Lys Tyr Asp Pro Gln Phe Gly Asp Ala Phe  
                  350                     355                     360  
 Trp Asn Ser Ser Lys Tyr Gly Met Val Thr Tyr Leu Leu Arg Met  
                  365                     370                     375  
 Met Thr Ser Trp Ala Ile Val Cys Ser Val Trp Tyr Leu Pro Pro  
                  380                     385                     390  
 Met Thr Arg Glu Ala Asp Glu Asp Ala Val Gln Phe Ala Asn Arg  
                  395                     400                     405  
 Val Lys Ser Ala Ile Ala Arg Gln Gly Leu Val Asp Leu Leu  
                  410                     415                     420  
 Trp Asp Gly Gly Leu Lys Arg Glu Lys Val Lys Asp Thr Phe Lys  
                  425                     430                     435  
 Glu Glu Gln Gln Lys Leu Tyr Ser Lys Met Ile Val Gly Asn His  
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 Lys Asp Arg Ser Arg Ser  
                  455

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 <212> DNA  
 <213> Homo sapiens

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 <221> unsure  
 <222> 63  
 <223> a or g or c or t, unknown, or other

<220>  
 <221> misc\_feature  
 <223> Incyte ID No: 1580751CB1

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 cgaggtcagc cgctccgcgc acgtccccctc gctgcagcgc taccgcgagc tgacccggcg 180  
 ctccgtggag gagccgcggg aattctgggg agacattgcc aaggaatttt actggaagac 240

tccatgcctt ggccattcc ttgggtacaa ctttgatgtg actaaaggga aaatcttc 300  
 ttagtgatg aaaggagcaa ctaccaacat ctgtacaat gtactggatc gaaatgtcca 360  
 tgagaaaaag cttggagata aagttgctt ttactggct tgccagcggg accaggatgg 420  
 ctattactgg atcactggca ggattgtga catgctcaat gtatctggg agggccaggg 480  
 gccacccattcc catcttatta actctgctcc tctgacaaca cccagccaa gccttccgca 540  
 agagcccagg agtgtcctt gcccagacca tgtactaagt gtagcattca gttctggcc 600  
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 <212> DNA  
 <213> Homo sapiens

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 gtgctcagac taaagcttt ctttatacgg gggttcatgt tggtaaaaat ccattgaatt 180  
 atatacgtag gatTTTgaa ctattttca taaagttta tatttcaata aaaagcttaa 240  
 agatataat atattttt ccatacatga caagtattgt atcatatata ctattttga 300  
 acttattccct ataaaatgtt atatttcaat aaaaactgac agatatatta cattatttc 360  
 catccatgac aagtattatt atatcataca tgctatttt tttttttt ttttttttga 420  
 gatggagttt cgcttggc ccaggctgga gtgcattggc gccatctcg cccaccgcaa 480  
 cctctgcctc ccagggttcaa gcgattctcc tgcctcagcc tcctgagtag ctgggactac 540  
 agcatgccc accataccca gctaattttg tgTTTTtagt agagatgggg tttctccata 600  
 ctggtcagggc tggctcAAA ctcctgaccc caggtgatcc gcctgcctca gcctcccaa 660  
 gtgctggat tacaggcgtg accaatgcac ctggctggaa ctccattttt acaacgtaac 720  
 tctgccatt taacctttt gtgacttggc accttccttt gcacccctgt accctcttg 780  
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 aaggattttt ggttccatgg aaggagttt gactctgggg ccagacacac ctaggaaccc 900  
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 tcccccattt taaaatgggg ttgatattcc caccttgcag ggatgtggca aactcagttt 1020  
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 aatgacatcc accgacttct gactccttcc agcaggcagc tggcctctcc aaggaataag 1680  
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 aaa 1803

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<212> DNA  
 <213> Homo sapiens

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gttttctct	ccattttatg gttgggaaaa	ttgaggcctg cctgagtg	tgacttgtgg 240	
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ggggcaggag	ggactcagag	gctgccccgt	tgtctgggg	tggccctggc gaaggagctc 720
atcttcacgg	gccgacact	gagtggaaact	gaggcccacg	tactggggct ggtgaatcac 780
gctgtggccc	agaacgagga	gggggacgccc	gcctaccaggc	gggcacgaggc actggcccag 840
gagatcctgc	cccaggcccc	cattgcccgt	cggtggca	aagtagccat tgaccgagga 900
acggaggtgg	acattgcata	tgggatggcc	attgaaggga	tgtctatgc ccagaatatt 960
ccaaaccggg	accggctaga	gggcatggca	gccttcaggg	agaagcggac tcccaaattt 1020
gttggcaaat	gaccccccatt	ttaaccttca	gcatggaga	tgcattccct gaagagcagg 1080
atccagaagg	aagatttgc	gccagattgc	cttcatcatt	tcacctctcc agacttccat 1140
ttcttcacaa	ggatgatgat	ggaaataaaa	tgactggcgt	gatgcctgga accaagggtgc 1200
tgatcctacc	acctactgct	accttcctt	gcttcaccct ggctagaaat	aatcacgagg 1260
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tctctctgaa	aaaaaaaaaa			1340

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 <212> DNA  
 <213> Homo sapiens

<220>  
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 <223> Incyte ID No: 2816341CB1

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ggggcggcggc	gcggggcgtg	aacgctctgg	ggctcagcca	ggcctgcgcg	ggcccgatgc 180
cggaggaacc	cggactccgg	cgtagcgggtt	ttgacacaag	ggcgcataatc	ttcaaagcac 240
cttgtaccc	ctaccattgt	caactgatac	agaattcggtt	tttgggaaagg	actggggaaa 300
cagctgtaac	atttgcacc	ctcagaagct	gctggctctg	tgtcacaccca	ccttagcctc 360
ttgatcgagg	aagattctcg	ctgaagtctg	ttaattctac	ttttttagt	cttatgaata 420
accacgtgtc	ttcaaaaacca	tctaccatga	agctaaaaca	taccatcaac	cctattctt 480
tatattttat	acattttcta	atactacttt	atactattt	aacatacatt	ccgttttatt 540
tttctccga	gtcaagacaa	gaaaaatcaa	accgaattaa	agcaaagcct	gtaaaattcaa 600
aacctgattc	tgcatacaga	tctgttaata	gtttggatgg	tttggcttca	gtattataacc 660

ctggatgtga tactttagat aaagtttta catatgcaaa aaacaaattt aagaacaaaa 720  
 gactctggg aacacgtgaa gttttaaatg aggaagatga agtacaacca aatggaaaaa 780  
 ttttaaaa ggttattctt ggacagtata attggcttc ctatgaagat gtcttggtc 840  
 gagcctttaa ttttggaaat ggattacaga tgttgggtca gaaaccaaag accaacatcg 900  
 ccatcttctg tgagaccagg gccgagtgga tgatagctgc acaggcgtgt tttatgtata 960  
 atttcagct tgttacatta tatgccactc taggaggtcc agccattgtt catgcattaa 1020  
 atgaaacaga ggtgaccaac atcattacta gtaaagaact cttacaaaca aagttgaagg 1080  
 atatagttc tttggtccca cgcctgcggc acatcatcac tggtgatgga aagccaccga 1140  
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 acattattgc tggtataact gggatggcag aaaggattcc agaacttagga gaggaagatg 1380  
 tctacattgg atattgcct ctggccatg ttctagaat aagtgcgtg cttgtctgtc 1440  
 tttctcacgg atgcccattt ggttactt caccacagac tttagcagat cagtcttcaa 1500  
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